

**ABSTRACT OF THE DISCLOSURE**

A differential pressure sensor based on pressure induced micro-flow that includes two connecting hoses that are considered when the pressure sensor is calibrated. The inventive differential pressure sensor includes a flexible hose as part of the device itself, and is calibrated with the flexible hose in place (consequently, a usable hose length needs to be specified beforehand). Calibration constants for the air flow channel are determined and stored in non-volatile memory, and used to provide accurate pressure measurements. Thus, impedance in the air flow path introduced by the flexible hose is considered when the pressure sensor is calibrated. That insures that any measurement of air flow is not adversely effected by the introduction of an impedance in the air flow path previously not considered by the sensor. The present invention thus provides a self-contained differential pressure sensing device suitable for detecting changes in pressure for applications where a small amount of leakage is acceptable.